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EXAMINER

RUTHKOSKY, MARK

ART UNIT	PAPER NUMBER
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1795

MAIL DATE	DELIVERY MODE
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01/10/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/758,764

Applicant(s)

YAMAGUCHI ET AL.

Examiner

Mark Ruthkosky

Art Unit

1795

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 October 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) 8-15 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1-7 and 16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

The rejection of claims 1-7 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention because the term “organic high molecular material” is indefinite has been overcome by applicant’s amendment. Although the term “organic high molecular material” does not require a polymer, the electrolyte is disclosed as a polymer electrolyte and this is considered support for the amendment (Page 17, second paragraph.)

Specification

The amendment filed 10/25/2007 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows. Applicant has substituted the term polymer for organic high molecular material in the specification where the term polymer is not supported. There is no support for a sintered polymer material. Applicant should remove the term polymer on page 8, 2nd full paragraph. Applicant is required to cancel the new matter in the reply to this Office Action.

The term Ketjen black is substituted for the disclosed ketchien black. This amendment is permitted as the terms are synonymous. Ketchien black is therefore support for adding Ketjen

black to the specification. The material is a type of furnace black as noted in Chang (US 5,542,163.)

Claim Objections

Claims 1-7 are objected to because of the following informalities:

The amendment filed 10/25/207 has added the tradename Ketjen Black to the claims. Chang (US 5,542,163) is submitted as evidence showing that Ketjen Black is a trademark (col. 6, lines 60-65.) Mitsufumi et al. (JP 09-035,718) further states Ketchien black is a tradename (p. 34.) Takeuchi shows it as a trademark in col. 7, line 7 and col. 9, line 20. Using a trademark *in a claim* is indefinite, as a trademark or trade name is used to identify a source of goods, and not the goods themselves (see MPEP 2173.05(u).) Thus, a trademark or trade name does not identify or describe the goods associated with the trademark or trade name. See definitions of trademark and trade name in MPEP §608.01(v). As the trademark or trade name is used in a claim as a limitation to identify or describe a particular material or product, the claim does not comply with the requirements of the 35 U.S.C. 112, second paragraph. Ex parte Simpson, 218 USPQ 1020 (Bd. App. 1982). The claim scope is uncertain since the trademark or trade name cannot be used properly to identify any particular material or product.

The use of the trademark should be capitalized wherever it appears in the specification and be accompanied by the generic terminology. Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner, which might adversely affect their validity as trademarks. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-3 and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Mitsufumi et al. (JP 09-035,718.)

Mitsufumi et al. (JP 09-035,718) teaches a non-aqueous electrolyte battery comprising an anode having an anode mixture containing an anode active material, and a cathode having a cathode mixture containing a cathode active material, said anode and the cathode being layered together via a separator (see paragraphs 2-33, figure 1 and the corresponding text); a solid electrolyte including a polymer material and an electrolyte salt contained therein (p. 28-29 and 35); and a film-shaped exterior material housing therein said battery device and the solid electrolyte (see figure 1 and p. 30 and 40); wherein a gas adsorbing carbon material formed of a carbonaceous material having a specific surface not less than 30 m²/g, said gas adsorbing carbon material being added to said anode mixture and/or said cathode mixture for adsorbing a gas evolved within the battery (abstract, p. 23-26.) Carbon black is activated carbon as it absorbs

gasses and is noted in an amount of 0.1-4% in the anode (p. 23-26.) Ketchien black and furnace black are taught in paragraph 25. Ketchien black and Ketjen black are the same material as noted above. The carbon material is taught to have a specific surface area of not less than 700 m²/g. Thus, the claims are anticipated.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4-5 and 7 rejected under 35 U.S.C. 103(a) as being unpatentable over Mitsufumi et al. (JP 09-035,718), as applied above, in view of Takeuchi et al. (US 5,807,645) OR over Takeuchi et al. (US 5,807,645) in view of Mitsufumi et al. (JP 09-035,718)

Mitsufumi et al. (JP 09-035,718) teaches a non-aqueous electrolyte battery, as noted. Mitsufumi et al. (JP 09-035,718) does not teach the battery to have a high surface area carbon added to the cathode mixture in an amount of 0.2-8 wt. % or a gel electrolyte comprising a non-aqueous electrolyte solvent. Takeuchi et al. (US 5,807,645) teaches a battery comprising a positive electrode comprising acetylene black or carbon black having a surface area of not less than 30 m²/s (claim 20) in a range of 1-10 and 2-8 wt. % (see example 1, claims 7-8 and 22-23.) Further, the battery includes a gel electrolyte comprising a lithium salt in a non-aqueous electrolyte solvent that is added to a polymeric separator (col. 5, line 7 to col. 6, line 15.) It would have been obvious to one of ordinary skill in the art at the time the invention was made to

include a high surface area carbon material in the cathode of Mitsufumi et al. (JP 09-035,718) OR to include a high surface area carbon in the anode of Takeuchi et al. (US 5,807,645), as both references teach that adding high surface area carbon diminishes cell swelling, suppresses an increase in internal pressure, and improves the charge transfer capability of the batteries (as taught in the references.) Based on the teachings of the references, one skilled in the art would be motivated to use more than one type of active carbon because each carbon material noted is taught to absorb gasses and conduct electrons in the electrode mixture. The high surface area carbon materials are taught to absorb gasses within the volume of the structure.

Further, using an electrolyte having a non-aqueous solvent would have been obvious to one of ordinary skill in the art at the time of the invention based on the electrolyte materials used in the battery. One of ordinary skill would recognize that aqueous solvents would be used in alkaline hydroxide cells and the non-aqueous solvent electrolytes will be used in lithium ion batteries. One skilled in the art would be motivated to use a non-aqueous solvent with electrodes that destructively react with water, such as lithium based anodes. The artesian would have found the claimed invention to be obvious in light of the teachings of the references.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mitsufumi et al. (JP 09-035,718), as applied above, in view of Bannai (US 6,503,656 and EP 1,063,713.)

Mitsufumi et al. (JP 09-035,718) teaches a non-aqueous electrolyte battery, as noted. The battery may be housed in a cylindrical or square shaped housing. Mitsufumi et al. (JP 09-035,718) does not teach the battery to have a laminate film of a metal layer and a resin layer as an exterior casing material. Bannai et al. (EP 1,063,713) teaches a battery to have a laminate

film of a metal layer and a resin layer as an exterior casing material (see the claims, p. 21-22.) It would have been obvious to one of ordinary skill in the art at the time the invention was made to house the battery of Mitsufumi et al. (JP 09-035,718) in a casing of a laminate film having a metal layer and a resin layer in order to provide a durable, light-weight casing that has low permeability due to the metal layer and high sealability due to the resin layer (see '713, p. 2-4.) The artisan would have found the claimed invention to be obvious in light of the teachings of the references.

Response to Arguments

Applicant's arguments filed 10/25/2007 have been fully considered but they are not persuasive. The references teach Ketchien black and Ketjen black as a carbonaceous electrode material. As the materials are the same, the rejections of record stand. Applicant's amendment to the claims is based on Ketchien black being equivalent to Ketjen black. One skilled in the art recognizes the two spellings of the furnace black to be equivalent and the same material.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Examiner Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark Ruthkosky whose telephone number is 571-272-1291. The examiner can normally be reached on FLEX schedule (generally, Monday-Thursday from 9:00-6:30.) If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached at 571-272-1292. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free.)

Mark Ruthkosky
Primary Patent Examiner

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MARK RUTHKOSKY
PRIMARY EXAMINER

Mr. Ruthkosky 1.5.2008